

2009 Consumer Confidence Report

Water System Name: MD-43 Miami Creek Knolls

Report Date: 6/21/10

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2009.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.

Type of water source(s) in use: Five wells drawing from water-bearing rock fractures

Name & location of source(s): Wells 2, 3, and 4 are located within MD-43. Supplemental water is purchased from Dillon Estates, MD-60. Their wells, 1 and 2, are located in MD-60.

Drinking Water Source Assessment information: Source water assessments were conducted for the Miami Creek wells in October 2002 and for the Dillon Estates wells in April 2002. While no contaminants exceeding current MCLs were found, the assessment identified septic systems in the area as having the potential for outside contamination. A copy of the complete assessment may be viewed at the Madera County Environmental Health Department, by visiting the State's website, www.dhs.ca.gov/ps/ddwem/technical/dwp/source_info/source_indexl.htm, or by requesting a summary of the assessment from Environmental Health at (559) 675-7823.

Time and place of regularly scheduled board meetings for public participation: Meetings are held at 9:00 a.m. each Tuesday, except the fifth Tuesday of any month, at the Board of Supervisors Chambers: 200 W 4th Street, Madera. Visit the County's website, www.madera-county.com/supervisors/agenda.html for a copy of the agenda.

For more information, contact: Julio Padilla

Phone: (559) 675-7820

TERMS USED IN THIS REPORT

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Variances and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (ug/L)

ppt: parts per trillion or nanograms per liter (ng/L)

ppq: parts per quadrillion or picogram per liter (pg/L)

pCi/L: picocuries per liter (a measure of radiation)

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- *Microbial contaminants*, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- *Radioactive contaminants*, that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the USEPA and the state Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, and 5 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The Department allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants (complete if bacteria detected)	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	(In a mo.) 0	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i>	(In the year) 0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper (complete if lead or copper detected in the last sample set)	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb) – 2008	5	<5	0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm) – 2008	5	0.14	0	1.3	0.17	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	6 & 12/08	18.3	17.5 – 19	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	6 & 12/08	116.6	94.9 - 139	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

*Any violation of an MC or AL is asterisked. Additional information regarding the violation is provided later in this report.

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Chlorite	8/04	0.18	0.18	1.0	(0.8)	By-product of drinking water disinfection
Chromium (ppb)	6 & 12/08	3.90	1.1 – 5.7	50	(100)	Discharge from steel & pulp mills and chrome plating; erosion of natural deposits
Nitrate (ppm)	2009	34.2	26.4 – 43.5	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Trihalomethanes (ppb)	6 & 12/08	3.9	0.62 – 7.3	80	N/A	By-product of drinking water chlorination
Gross Alpha (pCi/L)	3, 9 & 12/08	3.8	1.5 – 5.6	15	(0)	Erosion of natural deposits
Uranium (pCi/L)	9 & 12/08	1.6	1.6	20	.43	Erosion of natural deposits

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Chloride (ppm)	6 & 12/08	39.1	29.1 – 45.1	500	N/A	Runoff/leaching from natural deposits; seawater influence
Color (Units)	12/08	10	10	15	N/A	Naturally-occurring organic materials
Iron (ppb)	12/08	800*	<100 – 800	300	N/A	Leaching from natural deposits; industrial wastes
Manganese (ppb)	12/08	194*	<20 – 194	50	N/A	Leaching from natural deposits
Specific Conductance (micromhos)	3, 6 & 12/08	325	290 – 420	1600	N/A	Substances that form ions when in water; seawater influence
Sulfate (ppm)	6 & 12/08	7.5	4.7 – 9.6	500	N/A	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	12/08	230	230	1000	N/A	Runoff/leaching from natural deposits
Turbidity (Units)	6 & 12/08	1.9	0.1 – 5.2	5	N/A	Soil runoff
Zinc (ppm)	6 & 12/08	0.2	0.1 – 2.1	5	N/A	Runoff/leaching of natural deposits; industrial wastes

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language
Vanadium (ppb)	6/03	5.44		50	The babies of some pregnant women who drink water containing vanadium in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals

*Any violation of an MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

Additional General Information on Drinking Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Summary Information for Contaminants Exceeding an MCL, MRDL, or AL, or a Violation of Any Treatment Technique or Monitoring and Reporting Requirement

Water systems are required to *monitor* your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards.

The Miami Creek Knolls Water System has a history of failing to meet the Primary Standard for **Nitrates**. Although monitoring results for 2009 showed results below the 45 mg/L MCL, Nitrate levels may rise quickly for short periods of time and this leaves the possibility that levels could have been above the MCL and not been detected. **Nitrates** in drinking water at levels above 45mg/L are a health risk for infants of less than six months of age. Such nitrate levels in the drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness: symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain enzyme deficiencies. If you are caring for an infant, or are pregnant, you should ask advice from your health care provider. A cost effective means for removing nitrates does not currently exist. In an effort to provide you with safe water, we only use water from using water from Dillon Estates Water System during fall and winter. In the spring and summer we blend the water from your district's wells with the Dillon Estates water, which keeps the nitrate levels below the MCL. However since we cannot assure that the Dillon System has enough surplus water to provide your system water, you need to be aware that your water could exceed the nitrate MCL's.

In addition to the primary violations noted above, secondary violations remain for ***Iron** and ***Manganese**. Iron and Manganese were found at levels that exceed the secondary MCL's of 300 ppb for Iron and 50 ppb for Manganese. The high levels of these naturally occurring contaminants affect both color and clarity of the water through the process of oxidation. The high levels of iron are due to leaching of natural deposits. Secondary standards are set to protect you against unpleasant aesthetic effects (e.g., color, taste and odor) and the staining of plumbing fixtures (e.g., tubs and sinks) and clothing while washing. Violation of these standards does not pose a risk to public health and communities may decide whether or not to treat for them.

Madera County applied to the Safe Drinking Water State Revolving Fund in 2007. The district is in line for funding to make improvements to your water system and its supply. Unfortunately delays in administering these funds at the state level have prohibited improvements from moving forward. We hope that by the Fall of 2010 money for the planning of the improvements will come available. We will keep you informed of any progress.